Work Order ID 111971

January-29-14 8:38:35 AM

111971

Item ID: D4634-3
Revision ID:
Item Name: Middle, Center Ceiling Panel
Start Date: 30/01/2014 **Start Qty:** 1.00 *1*
Required Date: 24/02/2014 **Req'd Qty:** 1.00 *1*
Reference:

Accept *N900040100*

Setup **Start** *NS1*
Stop *NS2*

Cust Item ID:
Customer:

Approvals: **Process Plan:** ✓ **Date:** 30-1-14
QC: _____ **Date:** _____

Tooling: _____ **Date:** _____
SPC (Y/N): _____ **Date:** _____

Run **Start** *NR1*
Stop *NR2*

Draw Nbr	Revision Nbr
D4634	~~E~~ ~~F~~ ~~BB~~

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
100	HAND FINISHING THERMOFORMING	0.00							
100									
Thermoform	**Memo**	0.00				x1	____	____	14/01/31
Thermoforming Machine	Cut Blanks								
105	Dry Material	0.00							
105									
HandThermo	**Memo**	0.00				x1	____	____	14/01/31
Hand Finishing Thermoforming	Dry Sheet as per QSI022 POLYCARBONATE								

Temp: 250° F
Time IN: 5:00 pm 14/01/30
Time OUT: 6:00 am 14/01/31

DQA: _____ Date: _____

DART AEROSPACE

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐ Crosstube ☐ Water Jet ☐ Engineering ☐
Machining ☐ Small Fab ☐ Prod. Eng. Coor. ☐ Quality ☐
Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐
Large Fab ☐ Composite ☐ Supplier ☐ ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

☐ Bending
☐ Centre Not Concentric
☐ Cracks
☐ Crimp/Kink/Ripple/Wave
☐ Cuffs
☐ Crushing
☐ Heat Treat
☐ Inspection Strip in Tube
☐ Marks/Chatter
☐ Turning Sequence
☐ Wave/Twist in Tube

General

☐ Bend
☐ BOM/Route
☐ Broken/Damage/Defect
☐ Burrs
☐ Contamination
☐ Countersink
☐ Cut Too Short
☐ Drawing
☐ Drill Holes
☐ Finish
☐ Fit/Function
☐ Folio/Program
☐ Grain
☐ Hardware
☐ Inspection Incomplete/Unqualified
☐ Instructions Incomplete/Unclear
☐ Misaligned/off center
☐ Mislabeled
☐ Misread
☐ Off-set
☐ Out of Calibration
☐ Out of Sequence
☐ Outside Dimensions
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge
☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled
☐ Other

Work Order ID 111971

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Item ID: D4634-3
Revision ID:
Item Name: Middle, Center Ceiling Panel
Start Date: 30/01/2014 **Start Qty:** 1.00 *1*
Required Date: 24/02/2014 **Req'd Qty:** 1.00 *1*
Reference:

Accept *N9000040100*

Setup **Start** *NS1*
Stop *NS2*

Cust Item ID:
Customer:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Run **Start** *NR1*
Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
110	THERMOFORMING MACHINE	0.00							
110 Thermoform Thermoforming Machine	**Memo** Thermoform as per Dwg. D4634-3 and Folio FTA145 Dwg. Rev. E Folio Rev. D Visually inspect for proper formation and texture	0.00				X			14/01/31
130	HAND FINISHING THERMOFORMING	0.00							
130 Thermoform Thermoforming Machine	**Memo** Trim to Finished Dimensions	0.00				X			14/03/14
140	QC6- Inspect dimensions to drawing	0.00							
140 QC Quality Control	Dimensional Inspection **Memo** Fill out Inspection Sheet Rev. A	0.00 14/3/27				J			

DQA: _____ Date: _____

DART AEROSPACE

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

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- Scrap ☐
- Use-as-is ☐
- Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube	☐	Crosstube	☐	Water Jet	☐	Engineering	☐
Machining	☐	Small Fab	☐	Prod. Eng. Coor.	☐	Quality	☐
Thermoforming	☐	Finishing	☐	Rec/Store/Packaging	☐	Other	☐
Large Fab	☐	Composite	☐	Supplier	☐		☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
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Training	☐									
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- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete/Unqualified
- ☐ Instructions Incomplete/Unclear
- ☐ Misaligned/off center
- ☐ Mislabeled
- ☐ Misread
- ☐ Off-set
- ☐ Out of Calibration
- ☐ Out of Sequence
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Stop *NR2*

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QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	QC5- Inspect part completeness to step on W/O	0.00 DAS 27 9-89							
150									
QC	**Memo**	0.00 14/3/17							
Quality Control									
160	Packaging	0.00							
160		med Fab							
Packaging	**Memo**	0.00				(1)	SAD 14/03/17		
Packaging									
170	QC21- Final Inspection - Work Order Release	0.00							
170									
QC	**Memo**	0.00					RL 14-03-18		
Quality Control									

RL 14-03-17

DQA: _____ Date: _____

DART AEROSPACE

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☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled

☐ Other _____

Picklist Print

January-29-14 8:38:39 AM

Work Order ID: 111971 *111971*

Parent Item: D4634-3 *D4634-3*

Parent Item Name: Middle, Center Ceiling Panel

Start Date: 30/01/2014 **Required Date:** 24/02/2014

Start Qty: 1.00 **Required Qty:** 1.00

Comments: IPP Rev. A New Issue 12/05/07 DL VERIFIED BY:JLM IPP Rev. B Dwg. Update 13/07/09 DL verf:DD IPP Rev C Dwg Update, Material Change 13/12/18 DL IPP Rev D 14/01/20 Dwg. Update DL

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MLEXS.093-F6006-07		Purchased	No			100	sf	1,385.760	17.33	18			
MLEXS.093-F6006-07									**				
GE PLASTICS LEXAN SHEET													

Location	Loc Qty	Loc Code	
MAT023	1385.76		
114459	229.26		
123105	38		
124501	1118.5		18 sq ft

14/02/03

DQA: _____ Date: _____

DART AEROSPACE

WORK ORDER NON-CONFORMANCE / UPDATE

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Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

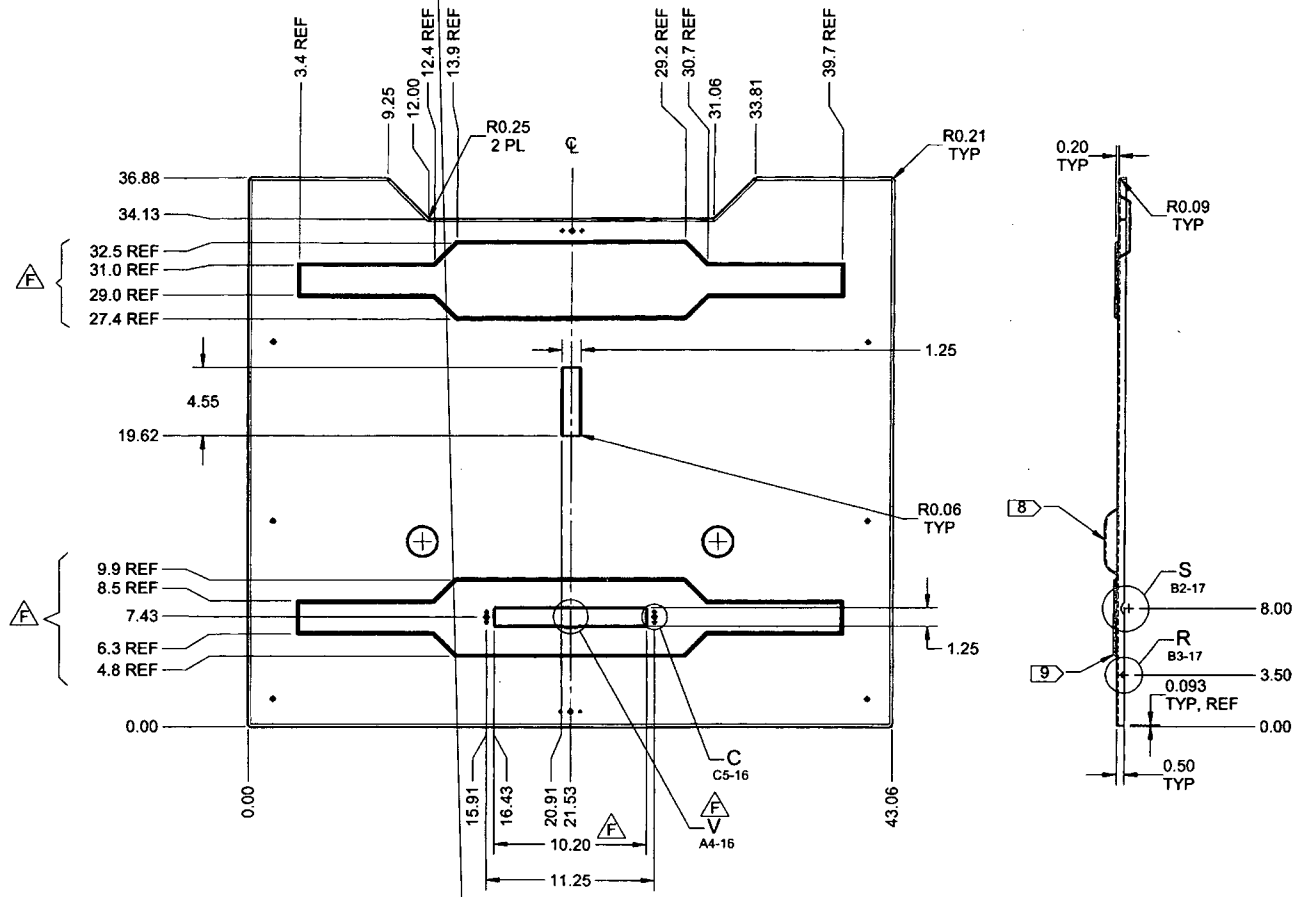
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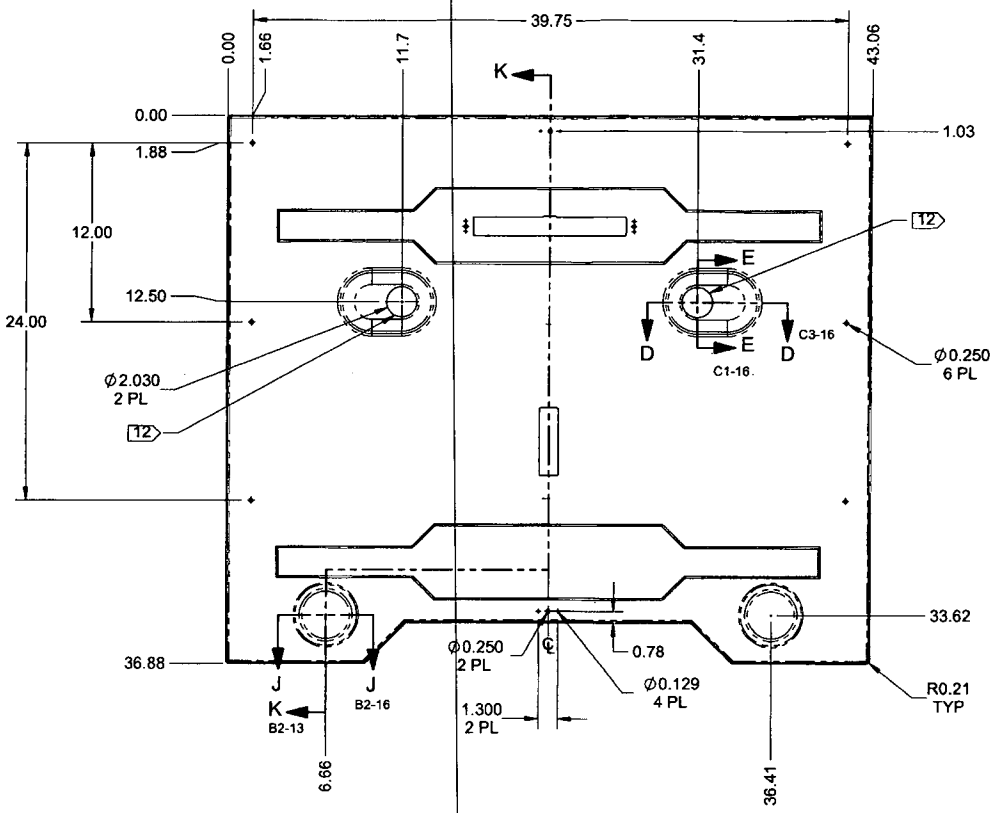
NOTES:
1) MATERIAL: F6006 SUEDE/POLISHED GY5B133 LIGHT GREY LEXAN SHEET 0.093 THICK
(REF DART SPEC MLEXS.093-F6006-07)
2) FINISH: N/A
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: N/A
7) WEIGHT: 6.49 lbs
8) TEXTURE ON THIS SIDE
9) 0.14 RADIUS NOT SHOWN FOR CLARITY
10) DRILL & TRIM D4634-3 PER TOOL DT9837
11) THERMOFORM PER QSI 022 USING DT9845 TOOL
MIN. THICKNESS AFTER FORMING:
EDGES = 0.060
ELSEWHERE = 0.070
12) LOCATE ⌀2.030 AT CENTER OF PROTRUDED SURFACE AS SHOWN

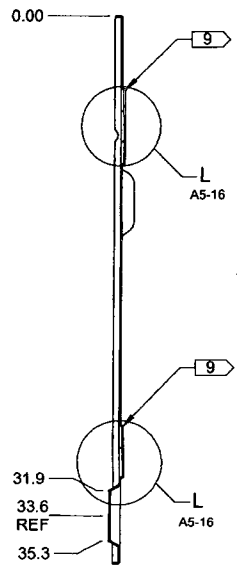
D4634-3 MIDDLE, CENTER CEILING PANEL

RELEASED
2014 FEB 25

DESIGN	RF	**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN	RF	
CHECKED		DRAWING NO. REV. F
MFG. APPR.		D4634 SHEET 12 OF 17
APPROVED		TITLE SCALE
DE APPR.		CENTER CEILING PANELS NTS
DATE	14.02.03	

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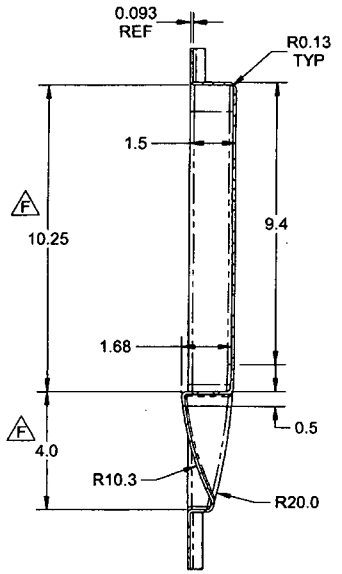
SECTION K-K B6-13

D4634-3 MIDDLE, CENTER CEILING PANEL
AUXILIARY VIEW

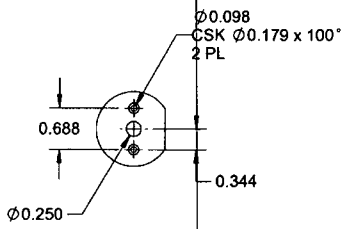
111971
30/1/14

RELEASED
2014 FEB 25

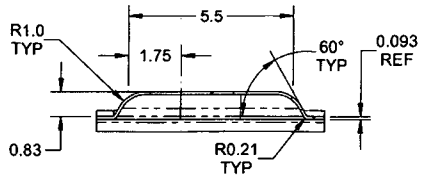
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DRAWN	RF		
CHECKED	BC	DRAWING NO. D4634	REV. F
MFG. APPR.			SHEET 13 OF 17
APPROVED		TITLE CENTER CEILING PANELS	SCALE NTS
DE APPR.			
DATE 14.02.03		COPYRIGHT © 2012 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	



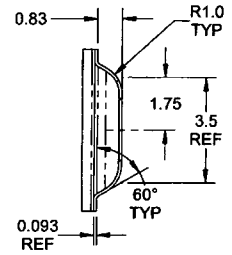
SECTION G-G C5-11
SCALE 4X



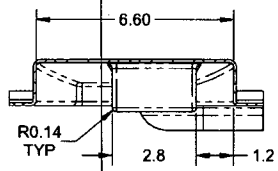
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SCALE 4X



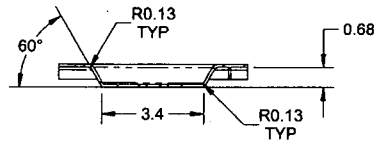
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SCALE 2X



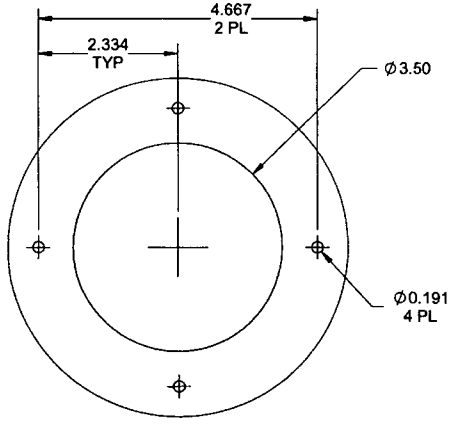
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SCALE 4X



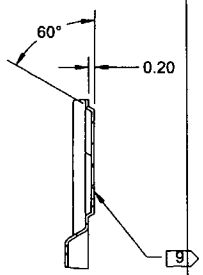
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SCALE 2X



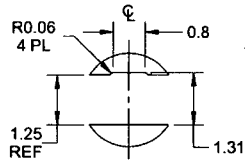
SECTION J-J B6-13
SCALE 2X



DETAIL B B7-10
SCALE 4X
2 PL



DETAIL L B2-13 C2-13 B2-14 C2-14
SCALE 4X
TYP

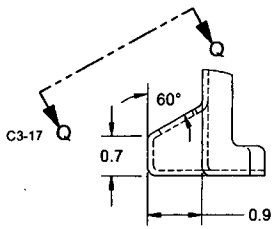


DETAIL V C4-10 B4-12 C4-14
SCALE 2X
SIMILAR

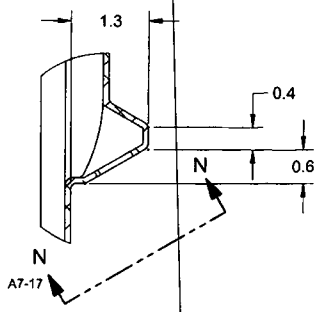
RELEASED
2014 FEB 25

DESIGN	RF	**DART AEROSPACE LTD**	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	BC	DRAWING NO.	REV. F
MFG. APPR.		D4634	SHEET 16 OF 17
APPROVED		TITLE	SCALE
DE APPR.		CENTER CEILING PANELS	NTS
DATE	14.02.03		

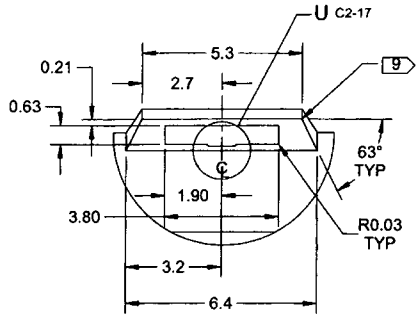
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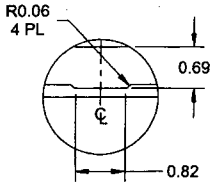
DETAIL P B3-14
SCALE 2X



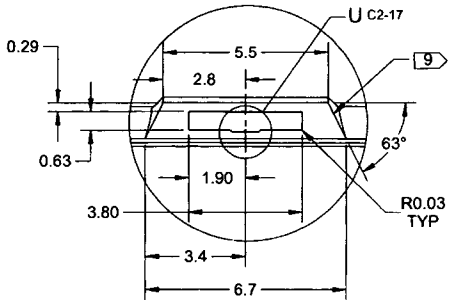
DETAIL M C3-10
SCALE 2X



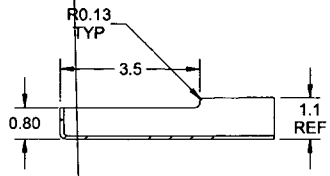
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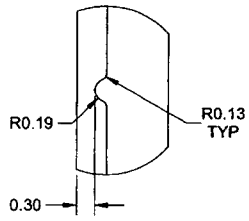
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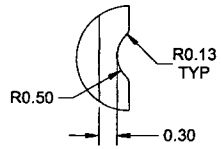
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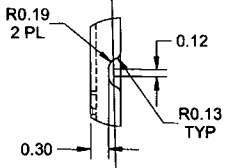
SECTION O-O B6-14
SCALE 1.3X



DETAIL R B3-10 C3-10 B2-12
SCALE 4X



DETAIL S B3-10 C2-12
SCALE 4X



DETAIL T C2-14
SCALE 4X

RELEASED
2014 FEB 25

DESIGN	RF	**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN	RF	
CHECKED		DRAWING NO. D4634 REV. F
MFG. APPR.		SHEET 17 OF 17
APPROVED		TITLE CENTER CEILING PANELS SCALE NTS
DE APPR.		
DATE	14.02.03	

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DART AEROSPACE LTD

Description: Ø Middle Center Ceiling Panel		**Work Order:**	111971
Inspection Drawing: 4634-3	**Rev:** F	**Part Number:**	111971

INSPECTION SHEET

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
4.55	+/-0.030	4.55			Tape	SFAP-21
19.62	+/-0.030	19.62			↓	↓
7.43	+/-0.030	7.43			↓	↓
20.91	+/-0.030	20.91			↓	↓
21.53	+/-0.030	21.53			↓	↓
10.20	+/-0.030	10.20			↓	↓
11.25	+/-0.030	11.25			↓	↓
12.00	+/-0.030	12.06			↓	↓
24.00	+/-0.030	24.00			↓	↓
39.75	+/-0.030	39.75			↓	↓
1.300	+/-0.010	1.300			↓	↓
Ø0.250	+0.005 -0.000	0.250			Vern	SFAM 08
Ø0.129	+0.005 -0.000	0.130			↓	↓
Ø2.030	+/-0.010	2.030			↓	↓
4.667	+/-0.010	4.667			↓	↓
2.334	+/-0.010	2.334			↓	↓
Ø3.50	+/-0.010	ØØ3.50			↓	↓
Ø0.191	+0.001 -0.004	Ø0.191			↓	↓
3.80	+/-0.010	3.80			↓	↓
0.63	+/-0.030	0.63			Vern	↓

Measured by: SAD	**Checked By:** DAS 27 9-89	**QC inspector:**	**Engineering Approval** (*if necessary*)**:**
Date 14/03/17	**Date** 14/3/17	**Date**	**Date**